

# Meteor 0228 (2020)

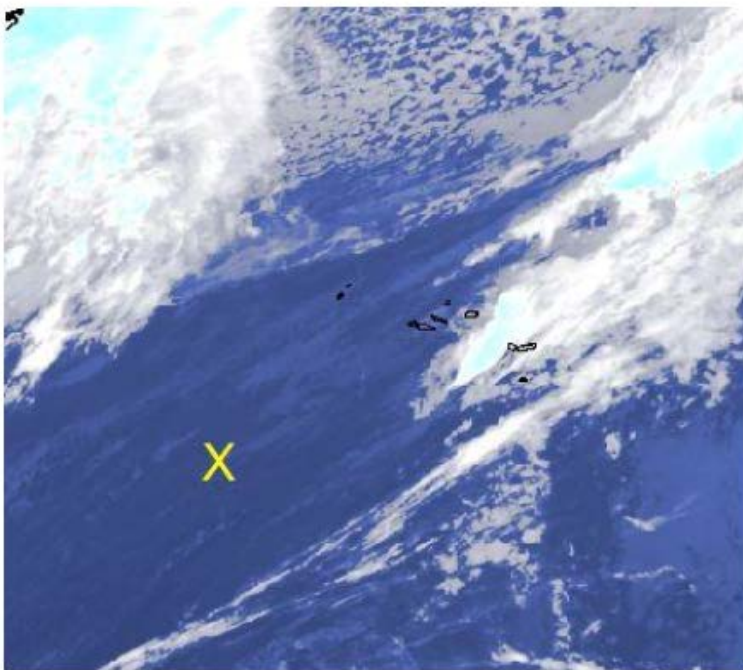
Stefan Kinne (29 feb 10am)

## 1. Objective

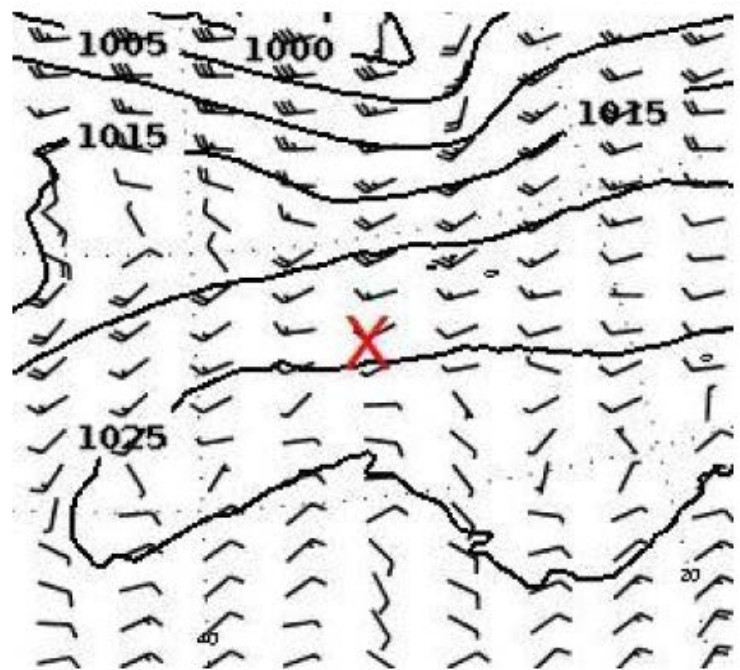
Deployment of the fifth (and last) ARGO float with a CTD profile down to 2000m, other CTD (daily cycle investigation) casts and two radiosondes launches at 10.35 and 22.35UTC

After the early morning float deployment it got slowly light and dust was still there. Total AOD,550nm was near 0.20 in the morning (higher than the evening before) and slowly declined to 0.15 during the day.

## 2. Synoptic Situation



Satellitenbild 28.02.2020 09 UTC



Vorhersage für Samstag 12 UTC

## Weather observations (every 3hr)

20	02	28001	99325	70373	16///	/3405	10190	20162	40193	51010	7/////	8/////	22212	04199
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	02	28031	99327	70368	46///	/3406	10188	20156	40196	51003	7/////	8/////	22212	04197
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	02	28061	99330	70362	16///	/3505	10184	20159	40189	58007	7/////	8/////	22212	04197
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	02	28091	99331	70360	41398	63407	10185	20157	40202	51013	70311	86200	22211	04198
20	100	33106	41103	50902	6	///	ICE	///	///	///	///	///	///	///
20	02	28121	99333	70355	11498	10205	10187	20154	40217	51015	70181	81800	22213	04197
20	201	307	///	40903	5	///	6	///	ICE	///	///	///	///	///
20	02	28151	99336	70349	41498	10105	10188	20155	40214	58003	70100	81200	22212	04196
20	100	309	///	40903	5	///	6	///	ICE	///	///	///	///	///

20 02 28181 99338 70345 11498 20104 10190 20152 40212 55002 70300 82200 22212 04199  
 20100 308// 40803 5//// 6//// ICE ////  
 20 02 28211 99340 70340 41498 10104 10187 20147 40228 53016 70200 81200 22212 04198  
 20100 307// 40803 5//// 6//// ICE ////

Lots of clear-sky and only a few low clouds (no cirrus, no rain), low clouds were sometimes in extended clusters.

### 3. Cruise-day Elements

IWV (integrated water vapor): 20 kg /m2 +/- 2  
 LWP (liquid water path): 13 g /m2 +/- 89

Time	0-3UTC	4-6UTC	7-9UTC	10-12UTC	13-15UTC	16-18UTC	19-21UTC	22-24UTC
Height_m	357.75	335.39	335.39	335.39	357.75	402.46	827.29	514.26
max_hydro_frac_low	0.14	0.15	0.22	0.26	0.08	0.08	0.17	0.01
Height_m	1207.39	1207.39	1207.39	1207.39	1319.19	1207.39	1207.39	1207.39
max_hydro_frac_mid	0.00	0.07	0.00	0.16	0.05	0.00	0.00	0.00
Height_m	12878.56	12878.56	12920.65	12878.56	12836.47	12878.56	12836.47	9722.05
max_hydro_frac_high	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

low=up to 1200m, mid=up to 6000m, high=up to 15000m

### hourly means of ship data (1<sup>st</sup> line 0-1 UTC, 2<sup>nd</sup> line 1-2 UTC ... last line 23-24 UTC)

salinity PSU	Tdew °C	Tair °C	Twater °C	TrueDir deg	RH %	rel.Wind m/s	trueWind m/s	lw Rad W/m <sup>2</sup>	sw Rad W/m <sup>2</sup>	lat °N	lon °E
36.3839	16.14	18.92	19.89	345.55	83.5	7.85	4.41	344.98	-1	32.5	-37.19
36.365	15.86	18.76	19.76	338.12	82.72	8.37	5.75	341.07	-1	32.59	-37.02
36.3652	15.71	18.71	19.76	340.25	82.15	8.29	5.39	348.67	-1	32.67	-36.84
36.3687	15.92	18.71	19.68	348.53	83.38	9.12	5.96	347.42	-1	32.76	-36.67
36.3737	15.95	18.62	19.7	224.32	84	8.6	4.78	352.27	-1	32.85	-36.5
36.3831	15.95	18.47	19.76	352.6	84.8	8.54	4.8	342.23	-1	32.94	-36.32
36.3998	15.94	18.43	19.73	346.22	85	8	4.82	341.35	-1	33.02	-36.15
36.3524	15.82	18.41	19.77	339.18	84.42	6.85	5.99	352.58	-1	33.09	-36.03
36.3511	15.87	18.48	19.8	338.92	84.28	6.4	5.95	347.07	-0.05	33.09	-36.02
36.3535	15.67	18.5	19.76	332.88	83.1	10.74	7.91	370.23	81.05	33.14	-35.92
36.3694	15.58	18.52	19.74	336.43	82.52	11	7.61	339.12	245.83	33.22	-35.74
36.4138	15.57	18.58	19.7	13.45	82.1	10.78	6.27	345.12	407.73	33.31	-35.55
36.3782	15.54	18.64	19.77	8.22	81.68	10.2	5.9	336.37	635.9	33.39	-35.36
36.2672	15.67	18.78	19.71	6.3	81.78	10.03	5.69	350.83	708.12	33.47	-35.17
36.3292	15.63	18.81	19.68	14.03	81.37	9.21	5.28	347.97	735.75	33.56	-34.99
36.3288	15.54	18.83	19.75	15.45	80.77	5.81	3.71	333.48	740.22	33.6	-34.9
36.3791	15.43	18.81	19.95	9.13	80.33	9.47	5.2	337.92	626.57	33.67	-34.74
36.3759	15.18	18.92	19.93	10.07	78.4	8.87	4.39	337.98	486.77	33.75	-34.55

36.4059	15.09	18.93	20	127.6	77.92	9.21	5.02	359.85	216.57	33.84	-34.37
36.3664	14.89	18.87	19.85	314.32	77.2	9.6	5.76	331.75	58.8	33.92	-34.18
36.3689	14.75	18.73	19.87	61.28	77.17	7.11	5.31	329.63	0.88	33.99	-34.02
36.3524	14.58	18.6	19.84	123.23	76.9	7.79	5.31	326.77	-1.27	34.02	-33.96
36.3661	14.26	18.52	19.74	354.62	75.78	9.11	5.71	327.27	-1.03	34.09	-33.79
36.3743	14.09	18.37	19.82	27.59	75.58	8.07	3.54	324.34	-1.59	34.18	-33.61

inter-calibration: none  
CTD stations: 3  
radiosondes: 2  
overflights: none

station no.	date / time UTC	device	action	latitude [°N]	longitude [°W]
M161 257	28 feb 2020 / 07:30-08:45	CTD	2000m	33°05.439 N	36°01.126' W
M161 258	28 feb 2020 / 08:52	ARGO	Deploy	33°05.590 N	36°01.173' W
M161 259	28 feb 2020 / 14:59-15:22	CTD	500m	33°35.206 N	34°55.261' W
M161 260	28 feb 2020 / 20:31-21:12	CTD	1000m	34°00.005 N	34°00.018' W

#### 4. Instrument Status

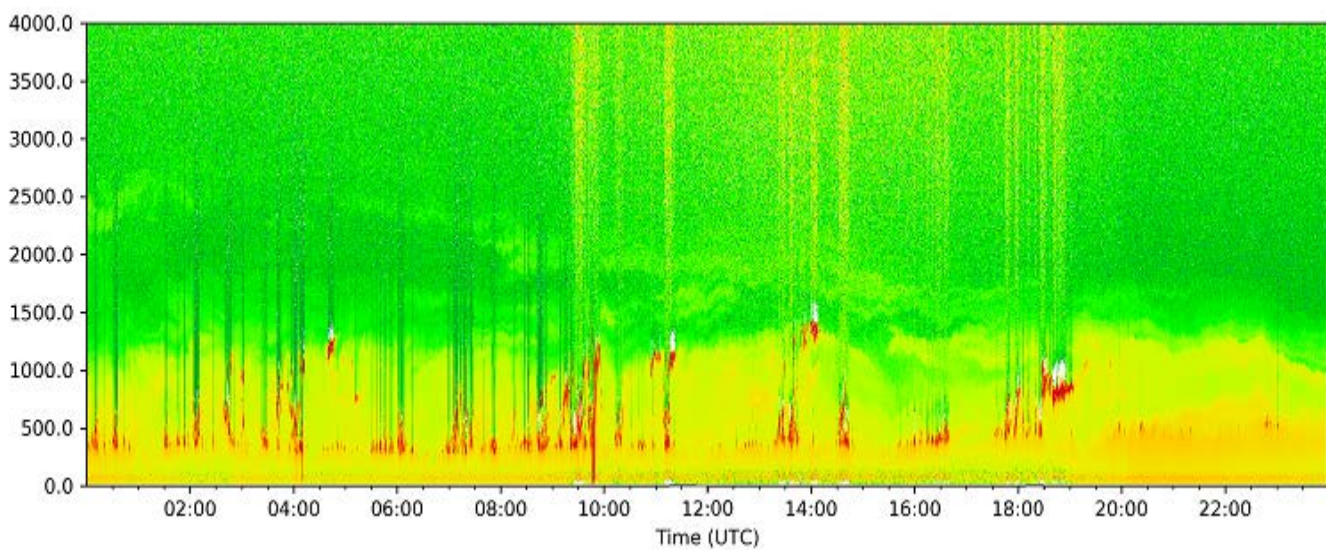
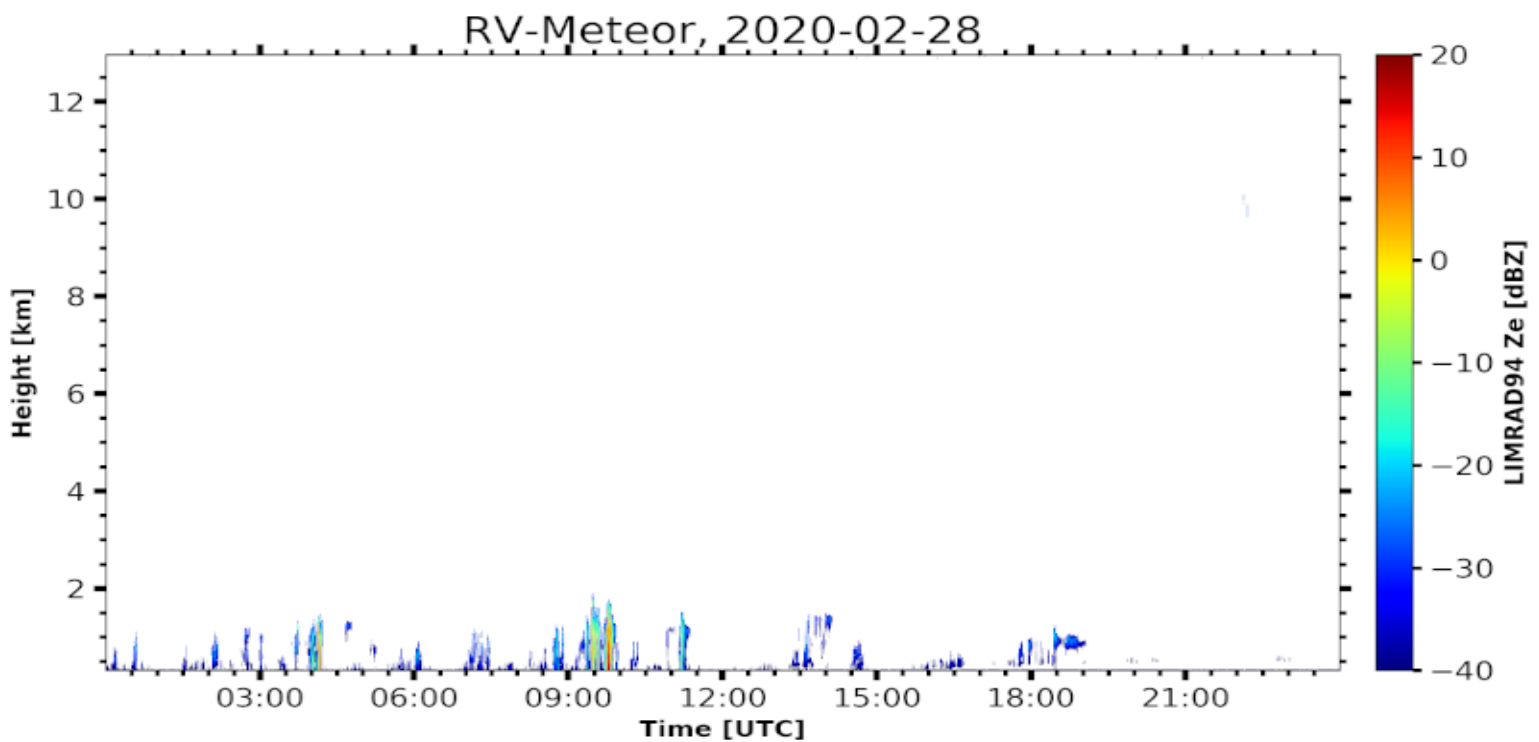
Instrument-Status (W-working, P-partially-working, F-failure, U-untested, R-ready, L-lost, S-stopped)

	status	operators
radiosondes	W	Katharina, Imke, Yanmichel, Almuth, Kevin, Sebastian, Geiske
cloud-radar	W	Heike, Johannes
micro-radiometer	W	Heike, Johannes
spect-radiometer	W	Heike, Johannes
Raman-lidar	W	Ludwig
spare cloud-kite	S	Oliver, Marcel, Marcel, Antonio, Robert, Sanola
Picarro	W	Sebastian
micro-biology	W	Wiebke, Jan, Abiel
ADPC ocean curr.	W	Callum, Beth
thermosalinograph	W	Callum, Beth
glider	S	Callum, Beth
UAV	W	Darek, Jakub, Michal, Wojciech
eddy-flux-data	W/S	Katharina, Imke, Heike
wind-lidar (DTU)	W	Geiske, Kevin
wind-lidar (Bre)	W	Geiske, Kevin
MAX-DOAS	W	Alma
ceilometer	W	Stefan
cloud camera	W	Stefan

sunphotometer			W	Stefan, Przemek, Andreas, John, Sanola
aero scat/abs			W	Przemek (Mr P)
WRAS (aero size)			W	Alma
CTD			W	Darek, Przemek, Beth, Callum, Alma, Sanola, Kevin, Robert, Wojtek, Almuth
Rodney			S	Darek, Jakub, Przemek

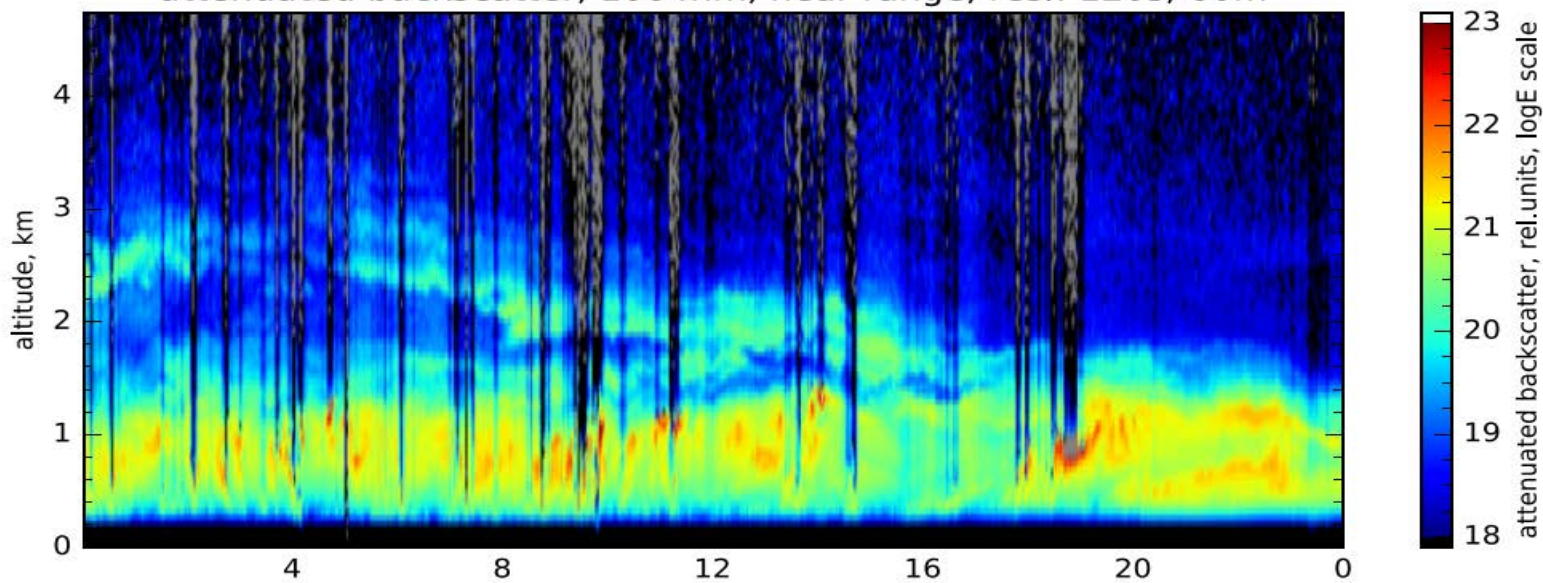
## 5. Outlook

Tomorrow is the last bord-party and packing preparations to Ponta Delgada are on the way.

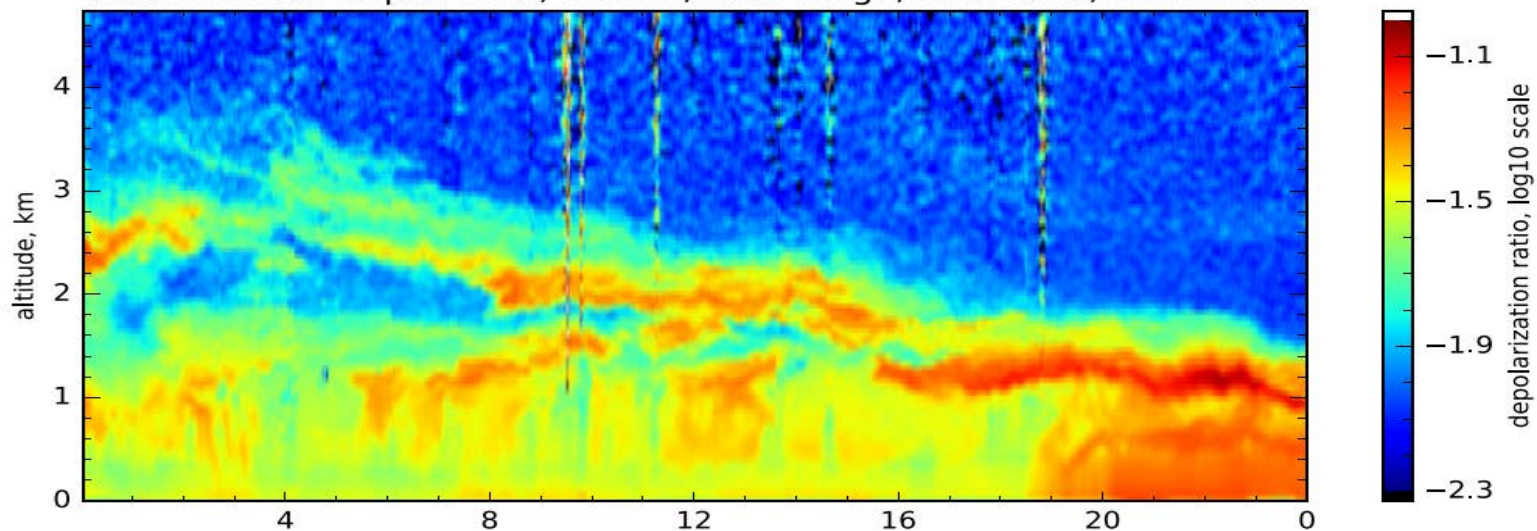


METEOR radar (top) and ceilometer (center and bottom) on Feb 28

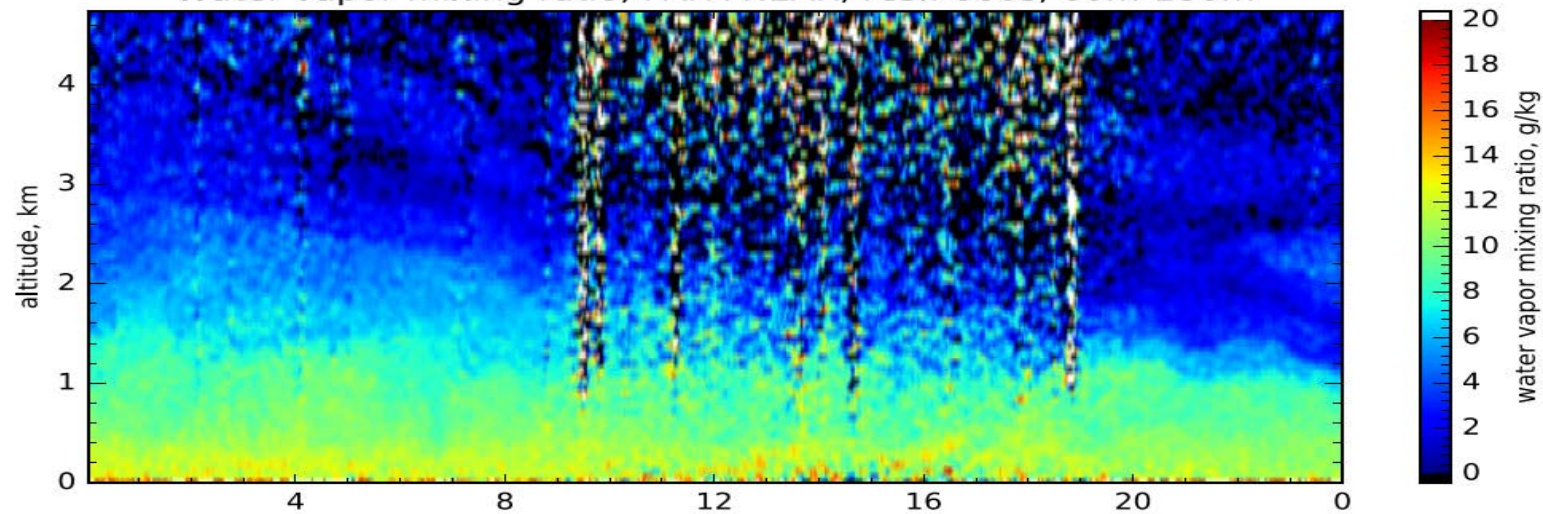
attenuated backscatter, 1064nm, near range, res.: 120s, 60m



Volume linear depol. ratio, 532nm, near range, res.: 600s, 60m-180m



Water vapor mixing ratio, FAR+NEAR, res.: 600s, 60m-180m



Raman Lidar data for Feb 28 (backscatter, depolarization, water vapor)